

## ABSTRACT OF THE DISCLOSURE

2           A sampling transition-detector sets two latches to different values when an input  
signal comparator referenced to the selected voltage transitions during a sample interval:  
4       at the beginning one latch receives one comparison value while at the end the other latch  
receives an opposite comparison value. A difference (XOR) in latched values indicates a  
6       transition through the selected voltage during the sample interval. An additional latch is  
set by a second input signal comparator whose reference voltage is offset slightly from  
8       the selected voltage, It also clocked at the start of the sample interval. If the two latches  
clocked at the start of the sample interval are different, as indicated by another XOR, then  
10      the input was between the reference voltage and its offset counterpart. The OR of the two  
XORs is the desired indication.